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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/277,171	03/26/1999	CAMERON BOLITHO BROWNE	169.1167	3147

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EXAMINER

AMINI, JAVID A

ART UNIT PAPER NUMBER

2672

DATE MAILED: 12/01/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

8

Office Action Summary

Application No.

09/277,171

Applicant(s)

BROWNE, CAMERON BOLITHO

Examiner

Javid A Amini

Art Unit

2672

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 June 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☐ Claim(s) _____ is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-38 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

Response to Arguments

Applicant's arguments filed June 14, 2004 have been fully considered but they are not persuasive.

Applicant on page 12 in third paragraph argues the reference Becker does not disclose or suggest the step of arranging the shape elements in an overlapping fashion to fill a predetermined region of the images such that the region has a substantially uniform opacity. Examiner's reply: (Examiner's interpretation for "the overlapping such that the region has a substantially uniform opacity" is equivalent to transparency. Becker in col. 3 lines 49-54 teaches transparency. Also see col. 2, lines 24-28. Examiner's comment: Applicant requires being more specific regarding the language in claim 1 section (c) "substantially uniform opacity".

Applicant on page 13 last two paragraphs argues that the Becker does not teach the feature of varying the opacity with time. Examiner's reply: Becker does not explicitly mention "varying the opacity with time", however Becker uses Gaussian function "*the Gaussian function has remarkable mathematical properties that are important, and the two-dimensional Gaussian function, see Becker in fig. 7A $g(x,y;t)$, is a function of time.*". Examiner's comment: Applicant should provide more specific information regarding the differences between Gaussian function as a function of time and the claim language of "varying the opacity with time".

Applicant on page 14 in first paragraph argues similar to the above argument.

Applicant on page 16 in first paragraph argues the reference Griffith et al. do not teach the features of claim 1, specially, combining an overlay of uniform opacity with a background image. Examiner's reply: Griffith et al. in fig. 2 steps 7-11 illustrate the step of arranging

Art Unit: 2672

elements in an overlapping fashion. Examiner's comment: Applicant should provide clear and specific explanation about arranging of elements in an overlapping fashion. Examiner believes the claim languages need to be amended, in order to present clearly the invention.

Applicant on page 17 in third paragraph argues that the office action does not indicate where the feature of "varying the opacity of elements over time ... ". Examiner's reply: Griffith et al. covers video image see fig. 1, meaning varying the opacity of elements over time. And Becker applied the Gaussian function, see previous page for more explanations. Cosman does not explicitly specify the claim language but in col. 5 lines 38-49 teaches pixel rendering in a real-time.

The previous rejection is still maintained.

Examiner encourages Applicant to setup an interview.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Becker (US patent no. 5,861,891) in view of Cosman (US patent no. 6, 147,690) and further in view of Griffith et al. (US patent no. 5,396,594).

Art Unit: 2672

Re claims 1, 36, and 38, Becker discloses 1.) a method of generating a coloured or shaded texture for images to be displayed on a display device or printed, the method including the steps of providing a plurality of shape elements, each shape element defining a surface (col. 3, Lines 47-67', col. 4. Lines 1-14: fig. 2-4 and 7A-in that figures 2-4 and 7A in Becker clearly discloses the plurality of shapes of a surface), 11.) providing each of the shape elements with an opacity which varies over its surface (col. 6, lines 34-58: fig. 2-4--Becker teaches a slider or controller is used to vary the value of the shape elements over its surface. Figures 2-4 of Becker disclose this part of the claim. Furthermore, he teaches producing a smooth volume image in an opacity splat plot (col.2, lines 17-28). Becker teaches an image consisting of shapes in relations to opacity. Also, Becker providing each of the shape elements with an opacity which varies over its surface when he discloses the variation in opacity from a peak at the center to zero point (col. 4. lines 9-13: fig. 7a); III.) rendering the shade elements for output to a printer or display device, such that the overlapping opacities generate a coloured or shaded texture (col. 1 and 2: col. 8, Lines 28-67: col. 9: fig. 1, 5. and 7A). In other words, Becker teaches the invention implement in the computer system in that a computer system includes a printer to output images. In figure 1, Becker discloses the displaying of splat plot that is the disclosing of the shade elements for output to a display device. Therefore, Becker teaches the step of rendering the shade elements for output to a printer or display device because he teaches the display of splat plot and the gaussian texture. However, Becker fails to explicitly teach arranging the shape elements in an overlapping fashion. But, Cosman teaches arranging the shape elements in an overlapping fashion. He discloses pixel-shading system for predetermined polygons. Ln that he improves multi-sampling that provides undiminished image quality for scene details behind transparent polygons and

Art Unit: 2672

proper concatenation of multiple overlaid transparent surfaces. Therefore, the multiple overlaid transparent surfaces are arranged in overlapping fashion. It would have been obvious to one of ordinary skill in the art at the time the invention was made to enable the step of arranging the shape elements in an overlapping fashion of Cosman to the system of Becker to sort all the transparent polygons in a front-to-back arrangement for processing the transparent polygon records (Cosman: col. 8, line 40 to col. 9, line 49; figs. 1-2 and 4). Furthermore, Becker and Cosman fail to explicitly teach the region has a substantially uniform opacity. Nevertheless, Griffith teaches an overlay of uniform opacity is to be combined with the background image. He teaches the amount of memory allocated to store each overlay image need only be sufficient to store precisely the amount of data relating to that overlay image. The One or more Overlay images may be stored in pre-multiplied form to ease the image combining calculation. The values of the pre-multiplied form may be stored as single 32 bit long words in random access memory. The editing may affect simultaneously the colour and alpha values for each affected pixel. Overlay images may be of any size (smaller equal to or larger than the frame store) and can be positioned at any offset to the frame store. The editing step may affect any number of layers simultaneously. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to enable the region has a substantially uniform opacity of Griffith to the system of Becker and Cosman to merge an image and a mask to form an image for display (Griffith: col. 2, line 23 to col. 5, line 60).

Re claims 24, 29-30, 32, and 34, Becker teaches 1.) apparatus and method for generating a coloured or shaded texture for images, the images to be displayed on a display device or printed,

Art Unit: 2672

the apparatus including providing a plurality of shape elements, each shape element defining a surface (col. 3. Lines 47-67: col. 4, Lines 1-14: col. 6, Lines 34-58, fig. 2-4, fig. 2-4 and 7A).

Figures 2-4 and 7A in Becker clearly discloses the plurality of shapes of a surface consisting of various splat plots in opacity surface; 11.) having an opacity which varies across the surface, providing a plurality of shape elements, each of the shape elements defining a surface and having an opacity which varies across the surface, and rendering the shape elements such that the overlapping opacities generate a coloured or shaded texture (col. 6, Lines 34-58: fig. 2-4).

Becker teaches a slider or controller is used to vary the value of the shape elements over its surface. Figures 2-4 of Becker disclose this part of the claim. Furthermore, he teaches producing a smooth volume image in an opacity splat plot (col. 2. lines 17-28). Becker teaches an image consisting of shapes in relations to opacity. Also, Becker providing each of the shape elements with an opacity which varies over its surface when he discloses the variation in opacity from a peak at the center to zero point (col. 4. Lines 9-13: fig. 7a); 111.) Outputting the coloured or shaded texture to a printer display device (col. 1 and 2: col. 8, lines 28-67: col. 9, fig. 1, 5, and 7A). Becker teaches the invention implement in the computer system in that a computer system includes a printer to output images. In figure 1, Becker discloses the displaying of splat plot that is the disclosing of the shade elements for output to a display device. Therefore, Becker teaches the step of rendering the shade elements for output to a printer or display device because he teaches the display of splat plot and the gaussian texture. IV.) The A computer storage medium bearing one or more computer software programs for execution on a computer, the computer software program or programs including compiled or uncompiled software instructions (col. 8, Lines 28-67: col. 9: fig. 5).

Art Unit: 2672

However, Becker fails to explicitly teach arranging the shape elements in an overlapping fashion to fill a predetermined region of the images such that the region has a substantially uniform opacity, the region lying within a boundary defined by a closed curve. But, Cosman teaches arranging the shape elements in an overlapping fashion to fill a predetermined region of the images such that the region has a substantially uniform opacity, the region lying within a boundary defined by a closed curve. He discloses pixel-shading system for predetermined polygons (i.e. polygons consisting of regions lying within a defined curve such as circle). In that he improves multi-sampling that provides undiminished image quality for scene details behind transparent polygons and proper concatenation of multiple overlaid transparent surfaces. As for filling a predetermined region of the images, Cosman teaches the sample processor consisting of polygon sample mask bits that fill the predetermined region of the images. It would have been obvious to one of ordinary skill in the art at the time the invention was made to enable the step of arranging the shape elements in an overlapping fashion to fill a predetermined region of the images such that the region has a substantially uniform opacity, the region lying within a boundary defined by a closed curve of Cosman to the system of Becker to sort all the transparent polygons in a front-to-back arrangement for processing the transparent polygon records (Cosman: col. 8, Line 40 to col. 9. Line 49: fig.1-2 and 4).

Re claims 2-6 and 25-26, Becker discloses the limitations in these claims (col. 1, lines 10r53: col. 3, Lines 55-61) by teaching the various sizes of the glyphs in his invention.

Art Unit: 2672

Re claims 7-11 and 27-28, Becker discloses the focal point and its location (col. 3. lines 13-38: col. 4, Lines 9r14). The axis in Becker discloses the focal point. Becker teaches the Gaussian functions, which include the focal point and its location.

Re claim 12, Becker discloses the predetermined function is exponential or linear (col. 6-8: fig. 6).

Re claims 13-23, 31, 33, 35, and 37, the limitations of claims 13-23, 31, 33, 35, and 37 are analyzed as discussed with respect to claims 1, 24, 29-30, 32, and 34-35 above.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Art Unit: 2672

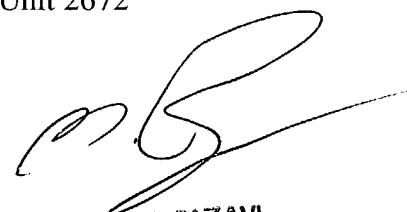
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Javid A Amini whose telephone number is 703-605-4248. The examiner can normally be reached on 8-4pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Razavi can be reached on 703-305-4713. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Javid A Amini
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Art Unit 2672

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